

REMARKS/ARGUMENTS

Claim 10 has been canceled. Claims 1-6, 8, 11 and 12 and new Claims 13 and 14 are active in the case. Reconsideration is respectfully requested.

The present invention relates to a process for the preparation of metal complexes with carbene ligands.

Claim Amendments

Claim 1 has been amended so that the result of the process is the production of a complex of a metal selected from groups 6-10 of the Periodic Table with a compound of formula (II) or (III) with the proviso that R⁷ substituent is not H, and that when groups R³ and R⁴ are bonded together to form an imidazole ring, the metal of the metal compound reactant can not be a member of group 10. Claim 10 has been canceled in favor of new Claim 13 which is a shortened version of the Claim 10. Entry of the amended claim is respectfully requested.

Claim Rejection, 35 USC 112, First Paragraph

Applicants contend that the Examiner's position that the process of the invention in Claim 1 is directed to all metal complexes known to man is completely without basis. Even in the unamended form of Claim 1, a fair reading of the claim limits the scope of the invention to a complex of a metal selected only from groups 6 to 10 of the Periodic Table with one of the compounds having formula (II) or (III). If these conditions are not satisfied, then a metal complex is outside the scope of the present claims. A formula of a metal complex does not have to be present in the claim in order to make this point clear! The scope of Claims 1-9 does **not** read on all metal complexes. Applicants have amended Claim 1 in an effort to clarify that the reaction between a metal compound with a compound of either formula (II) or

(III) results in a complex of a metal taken from groups 6 to 10 with one of the unsaturated compounds of the indicated formulas. Accordingly, the metal complex catalyst produced by simply reacting an appropriate metal compound with an unsaturated compound of either formula (II) or (III) is fully enabled by the text. The burden of an alleged undue amount of experimentation is not placed on the skilled artisan to determine if a given metal complex is within the scope of the present claim, because it is clear that if a reaction occurs when a group 6 to 10 metal compound is combined with an organic ligand molecule of formula (II) or (III), and a metal containing reaction product is obtained, the product must be constituted of a metal selected from groups 6 to 10 and the unsaturated ligand molecule of formula (II) or (III). Withdrawal of the lack of enablement rejection is respectfully requested.

Claim Rejection, 35 USC 112, Second Paragraph

The Examiner comments that the process set forth in Claim 1 is indefinite because it recites only a single step of “reacting” a metal compound with a compound of one of the two stated formulas. Applicants do not concur with this conclusion by the Examiner. In the first place, where is it stated in U.S. law that a process or method is indefinite if it only recites one step? Secondly, in fact, the present process is accomplished when an appropriate metal compound as set forth in the claim is reacted with a compound embodiment of one of the two formulas set forth in Claim 1 in a single reaction step. In this regard note the disclosure at page 9, lines 6-8 of the specification that in effect, the *metal complex forming* reaction can be accomplished in a single step by (1) extension of the ligand sphere of the metal being complexed or by (2) displacement of one or more ligands already present in the metal compound reactant. The disclosure of the text at page 15, lines 9 and 10 is consistent with the “one step” synthesis of the metal complex catalyst of the invention where it states that the

metal complex can be (1) isolated after the reaction and then used as a catalyst, or (2) generated *in situ* and used directly as a catalyst or precatalyst.

The Examiner states in Advisory Action that *the specification does not provide a process of making the imidazolium compounds without using a Group 10 metal*. This is manifestly incorrect. Pages 10 and 11 of the specification show a number of specific examples of metal compounds that undergo the process of the invention in producing metal complexes. Specific metal compounds are disclosed of the three Group 10 metals of palladium, platinum and nickel, and in addition rhodium (Group 9 metal) and ruthenium (Group 8 metal). Details of a number of embodiments of producing metal complexes are described on pages 13-15 of the specification. Accordingly, the present specification is clearly enabling to one of skill in the art to prepare any desired complex that is within the scope of the present claims.

The Examiner also states that the (present) process uses known intermediates and does not state a final product other than being a metal complex. However, the claims have been rejected in view of the disclosure of only the McGuinness et al document which only describes the reaction of a zerovalent Group 10 metal precursor with imidazolium salts. This particular reaction has been eliminated from the scope of the present invention by the proviso language that is employed in Claim 1. The proviso language ***does not*** introduce new matter into the case, because all it does is to more narrowly define the scope of the claimed invention. The remainder of the claimed subject matter exists as originally presented. Thus, no new matter is involved. Moreover, as to the Examiner's comment that the Claim 1 does not state a final product other than it being a metal complex, applicants point out that the claim specifically requires the reaction of a metal compound selected from Groups 6 to 10 with a compound of formula (II) or (III) which means that the product obtained necessarily is a complex of a metal compound selected from Groups 6 to 10 with a compound of formula

(II) or (III). Such metal complexes do not read on the cited McGuinness et al document.

Claim 1 is therefore not believed to be indefinite as to metes and bounds. Withdrawal of the rejection is respectfully requested.

The indefiniteness issue that has been raised with respect to Claims 1 and 2 is also believed to be without basis, because, again, applicants are not claiming just a metal complex, but are claiming a metal compound selected from Groups 6 to 10 complexed with a compound of formula (II) or (III) under the stated proviso. Moreover, the particular metal complex of Claim 3, while representing a preferred embodiment of the complex catalyst of the invention, is of much restricted scope to which applicants do not wish to be constrained. Accordingly, withdrawal of the rejection is respectfully requested.

Prior Art Rejection

Claims 1-9 stand rejected based on 35 USC 102 or 35 USC 103 as anticipated or rendered obvious over McGuinness et al. This ground of rejection is respectfully traversed.

As to the matter of support for the proviso clause previously introduced into Claim 1, applicants emphasize that the proviso clause limits the scope of the metal complex produced by the process of Claim 1, so that applicants are now claiming a metal complex of lesser scope than they originally had a right to claim, but which they are now voluntarily claiming. Since the original claim was fully supported by the disclosure, Claim 1, restricted in scope as it presently exists, is also supported. The result is that the claimed process is distinguished over the process of McGuinness et al, and that the claim, restricted in scope, does not contain new matter. Accordingly, the limited disclosure of McGuinness et al that only describes the reaction of a zerovalent Ni, Pd or Pt precursor with imidazolium salts does not suggest all remaining embodiments of the present invention in which only the imidazolium salts of a zerovalent Ni, Pd or Pt precursor are excluded, particularly in view of the statements in the

abstract of the reference which actually speak to different reactivities of the three zerovalent group 10 metals with imidazolium cations. What would lead the skilled artisan to the expectation that a number of transition metals other than the three metals disclosed in the reference would successfully react with and form metal complexes with embodiments of the unsaturated compounds of present formulas (II) and (III)? Accordingly, the obviousness ground of rejection is obviated and withdrawal of the rejection is respectfully requested.

New Claim 14 is clearly distinguished over the over the cited McGuinness et al reference, because all imidazolium salts as complex forming ligands are eliminated from the claim.

New Matter Rejections 35 USC 112, First Paragraph

Claims 1-6, 8 and 10-12 stand rejected based on 35 USC 112, first paragraph. This ground of rejection is respectfully traversed.

The Examiner states her understanding that the original claims where directed to medicaments. Applicants query where in the disclosure in the specification or claims is there reference to medicaments? To the contrary, original Claims 9 and 10 mention that a variety of known types of reactions can be catalyzed by the catalyst produced by the metal complex of the invention; the process known as telomerization being an important one. None of the reactions of these claims are medicament preparation reactions.

Again, as to the matter of the proviso limitation in the present claims, applicants have a right to claim the present invention as they desire. Since the claims prior to the introduction of the proviso clause are fully supported, the subject matter that remains after the application of the proviso limitation is also fully supported and enabled. Accordingly, the present specification indeed does describe the present invention as it stands amended.

The Examiner raises the issue of the desired intent of applicant at the time the

application was filed with respect to the proviso limitation. However, this is not the issue. Obviously, applicant did not consider the insertion of the proviso limitation into Claim 1 before the subject matter of the McGuinness et al document came to light during prosecution. The limitation was introduced into Claim 1 in order to avoid claiming subject matter that is disclosed in the reference. However, applicants have exercised their right to claim the invention as they deem sufficient in order to patentably distinguish their invention over McGuinness et al. With regard to the specific matter of Claim 6, every one of the five specific metals mentioned can be used to prepare a metal complex with an embodiment of the organic compound of formula (II). The same thing is true with respect to compound embodiments of formula (III). Accordingly, the fact that imidazolium salts have been eliminated from the scope of the present claims does not in some way invalidate Claim 6. Claim 6 is valid with respect to the remaining scope of organic ligands that may react with anyone of the metals of groups 6 to 10. Withdrawal of the rejection is respectfully requested.

With respect to the new matter aspect raised under the first paragraph of 35 USC 112, again applicants emphasize that they had the scope of the subject matter as originally claimed in hand at the time of the invention. The proviso language merely deletes some of the subject matter from the claims, thereby narrowing the scope of the claims. Otherwise, the remaining subject matter of the claims is the same subject matter disclosed and claimed from the beginning. Thus, amended Claim 1 does not introduce new matter into the application.

Claims 10-12 stand rejected based on 35 USC 112, second paragraph. This ground of rejection is respectfully traversed.

Applicants first point out that the preamble of Claim 11 defines the claim as directed to a method *of telomerization*, and that Claim 12 is a claim which is dependent on Claim 11. The fact that the preamble describes a method of telomerization is entirely contradictory of the Examiner's complaint that these claims do not contain descriptive language of a particular

type of method. Telomerization is a well known type of reaction, an embodiment of which is the reaction of a nucleophile with a diene (see page 17 of the specification). Therefore, there is no issue with respect to these two claims.

As to Claim 10, a preamble which simply recites "A method of" is also an entirely sufficient preamble, since whether a particular independent claim is directed to a method of "preparing," "using" or "making" is evident from the subject matter of the claimed method which follows the preamble of the claim. In the case of Claim 10, the metes and bounds of the claimed method are clear from the language of the claim after the preamble in terms of the specific types of known methods of synthesis that are recited as such are catalyzed by the catalyst of the invention. Accordingly, withdrawal of the rejection is respectfully requested.

It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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